PARALYSIS OF ALL THE OCULAR NERVES.—Dr. H. Bresgen, of Kreuznach, reports in the *Deutsche Med. Wochenschr.* the following case: On September 2, 1875, he saw, for the first time, a well-formed and nourished and previously sound female, aged 25, who had been seeing double for a few days. The trouble was evidently due to paralysis of the right abducens. In the following spring, bilateral ptosis appeared, with slow but steadily advancing paralysis of all the muscles of the left eye, so that all movements were impeded. In the meanwhile the vision was unimpaired; also the pupillary reaction and the accommodation. The ophthalmoscope revealed nothing abnormal. The eyelids could be only partially closed. The patient's condition continued to grow worse till, in the beginning of 1879, both eyes were completely paralyzed, the ptosis more marked, and the eyelids could not be brought together. Speech was also much altered, though the lips and tongue were freely movable and nothing abnormal was observed in the palate; the voice was strongly nasal and the labials B and P could not be pronounced. Together with these symptoms appeared difficulty in swallowing, and noticeable emaciation. The movements of the iris and the accommodation remained perfect. By the commencement of the year 1880, the symptoms of bulbar paralysis had so advanced, together with general emaciation, that the patient could no longer be understood; the upper branch of the facial was also paralyzed, but the pupillary and accommodation movements were still perfect. Death occurred early in February.

Though a *post mortem* was not performed the clinical history indicated a combined paralysis of the two oculo-motor, trochlear, and abducens nerves, together with the upper branches of the facial, occurring before the dysphagia and alalia revealed the general bulbar paralysis. It indicates, also, very clearly, a lesion of some kind in the floor of the fourth ventricle and the aqueductus Sylvii, involving the angle of the facial root, the trochlear nucleus, and the fibres of origin of the motor oculi, except its most anterior fasciles. Hence the normal pupillary reaction and accommodation, which are incompatible with total paralysis of the third nerve, Graefe to the contrary notwithstanding, as has been shown by Volkers and Hensen, whose conclusions Dr. Bresgen quotes.

THE RELATION OF THE NERVES TO ANEURYSM.—Lewaschow, *St. Petersb. Med. Wochenschr.*, August 14th, publishes the account of some researches, undertaken by himself in Botkin's laboratory, for the purpose of ascertaining the effects of the nerves on the nutrition of the blood-vessels, and their relations to the production of aneurysm. The subjects of his experiments were dogs and cats, and he chose the nerves of the posterior extremity for his operations. After exposing the main sciatic of the limb, he irritated it with dilute acid, taking all precautions to avoid disturbing its surrounding tissues. Then the wound was closed and left alone for four to six days, then the operation was repeated, and so on, till the death of the animal. Immediately after the operation, the temperature of the limb operated upon rose, and, as a rule, continued higher than that of the other corresponding limb. Sensibility was not much disturbed in successful cases; the bodily temperature was only slightly increased. Death occurred rapidly in a few cases from gangrene of the operated limb; others survived several weeks, dying of dysentery or putrid infection, and some, as much as two months, and these last are the ones from which he draws his conclusions.

Part of the animals exhibited no other consequences of the operation than those mentioned above. Others, however, after a longer or shorter period, developed convulsive phenomena, very closely resembling epilepsy, occurring at first but seldom, but increasing in frequency as time passed, so that some died in almost continuous convulsions.

The section showed in the above animals results approximately alike, and the more pronounced, as a rule, the longer the time since the irritation of the nerve had been begun. The thigh of the operated side was more or less atrophied, the lower leg and foot hypertrophied, and inflammatory swellings, etc., on the skin, elsewhere than where the nerve was exposed. The nerve itself was noticeably thickened, reddened and grown to the adjacent tissues. The arteries exhibited, especially at the junctions of the smaller branches with the main stem, moderate-sized swellings, yellowish-white in color, sometimes also dirty-red in comparison with the other portion of the inner wall of the vessel.

The microscopic appearances of the vessels of both the limb operated on and the corresponding sound one were compared. Besides those appearances already described as observable microscopically, there were found marked changes in parts apparently healthy on naked-eye observation. These consisted chiefly of a noticeable infiltration of the adventitia, and partly also of the media of the vessels, with round and elongated cells. These alterations toward the periphery resembled more a gradual increase of the cell elements ; toward the centre they took more the character of an infiltration.

Lewaschow also experimented by extirpating the lower cervical and upper thoracic ganglia, in order to ascertain whether it would cause any alteration of nutrition in the large vessels of the thorax. Though the experiments were not altogether satisfactory on account of the animals dying too soon, there were found quite pronounced inflammatory alterations in the aorta, especial at the points where the branches were given off. Still, the general phenomena of pleuritis and pyæmia which accompanied these alterations, made it difficult to speak positively as to their cause. He is still continuing the investigations on these points.

LOCOMOTOR ATAXY.—Dr. George Fischer, *Deutsch Arch. f. Klin. Medicine*, Bd. xxvi, p. 83 (abstr. in *Deutsche Med. Wochenschr.*, No. 38, 1880.)

I. The author calls attention to a peculiar connection between the patellar reflex and conduction of painful impressions in locomotor ataxia. Out of nineteen cases examined, there was retardation in fifteen, and normal conduction in four, in the lower extremities, and in these last he still found the tendon reflex, and normal condition of the bladder, both of which were lacking in the others. One case, which formed the transition between the others, exhibited a peculiar condition ; on one side there was impaired tendon reflex and pain-conduction, and on the other, the normal conditions. On physiological grounds, he thinks that in these cases, with the normal tendon reflex and conduction, the morbid process is confined to the posterior columns without implication of the gray substance.

II. A symptom first described by Leyden and more recently mentioned by Remak, is the separation in time of the perceptions of tact and pain in simple prick with needle. It indicates a simple diminution of the cross section of the gray substance with still functioning posterior columns. Among the fifteen cases with retarded pain-conduction, Fischer found this double sensation in eight. The examination for this phenomenon revealed a curious anomaly in the cutaneous reflexes. The normal reflex acts, as is well known, according to Pflueger's law along the motor nerves from that point of the cord where the sensory nerves excited join it. With stronger excitations it reaches still higher spinal cen-